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claims priority of European Patent Application No. 99106565.7, filed on March 31, 1999, and the benefit of U.S. Provisional Application No. 60/127,885, filed on April 5, 1999.--

IN THE CLAIMS:

Please cancel claims 1-29 without prejudice or disclaimer and substitute new claims 30-58 therefor as follows:

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30. A method for the manufacture of an optical cable, comprising: incorporating at least one optical fibre in an extruded polymer material in contact with a strand-like element which comprises:

- arranging said optical fibre along an open helix trajectory, and

- applying to said optical fibre a maximum local torsion of between 0.05 turn/m and 1.5 turn/m.

31. A method according to Claim 30, which comprises applying to said optical fibre a maximum local torsion of between 0.1 turn/m and 1 turn/m.

32. A method according to Claim 30, which comprises applying to said optical fibre a zero mean torsion.

33. A method according to Claim 30, which further comprises:

- feeding said strand-like element through an extrusion zone in a predetermined feeding direction;

- feeding said optical fibre through said extrusion zone at a predefined distance from said strand-like element; and

- supplying said polymer material into said extrusion zone so that said polymer material envelopes said strand-like element and said optical fibre.

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34. A method according to Claim 30, which comprises incorporating between 2 and 24 optical fibres in said polymer material.

35. A method according to Claim 33, wherein said arranging said optical fibre along an open helix trajectory comprises imparting an alternate twist to said strand-like element.

36. A method according to Claim 33, wherein feeding said optical fibre through said extrusion zone comprises torsionally constraining said optical fibre upstream of said extrusion zone at a predetermined distance from said extrusion zone and said applying a maximum local torsion to said optical fibre comprises adjusting said distance of said constraint from extrusion zone in relation to said maximum local torsion.

37. A method according to Claim 35, wherein said imparting an alternate twist to said strand-like element comprises imparting to said strand-like element a predetermined angular speed (ω) and a predetermined maximum angle of torsion (α'_{max}) and said feeding said strand-like element comprises displacing said strand-like element at a predetermined feeding speed (v), said applying a maximum local torsion to said optical fibre comprising the step of adjusting said angular velocity, said maximum angle of torsion or said feeding speed in relation to said maximum local torsion.

38. A method according to Claim 30, wherein said arranging said optical fibre along an open helix trajectory comprises associating a spatial inversion pitch (P) of between 0.5 m and 5 m with said trajectory.

39. A method according to Claim 33, wherein said feeding said optical fibre into said extrusion zone comprises conveying said optical fibre towards said extrusion zone

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by means of a support which is provided with channels and through which said strand-like element passes centrally.

40. An optical cable for telecommunications comprising a substantially strand-like central element, at least one optical fibre and a layer of polymer material which is substantially devoid of discontinuities and incorporates said central element and said optical fibre, said optical fibre being arranged along an open helix trajectory and having a torsion chosen so that the PMD measured on said cable is less than 110% of the PMD measured on a non-cabled optical fibre of the same type.

41. An optical cable according to Claim 40, wherein said optical fibre has, along the respective open helix trajectory, a maximum local torsion of between 0.05 turn/m and 1.5 turns/m.

42. An optical cable according to Claim 40 wherein said optical fibre has, along the respective open helix trajectory, a maximum local torsion of between 0.1 turn/m and 1 turn/m.

43. An optical cable according to Claim 40, wherein said optical fibre has, along the respective open helix trajectory, a zero mean torsion.

44. An optical cable according to Claim 40, comprising a number of optical fibres ranging between 2 and 24.

45. An optical cable according to Claim 40, wherein said optical fibre has, along the respective open helix trajectory, a maximum winding angle (α_{max}) which is less than or equal to, in terms of absolute value, 360° and a maximum angle of torsion (β_{max}) smaller than, in terms of absolute value, said maximum winding angle.

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46. An optical cable according to Claim 45, wherein said maximum angle of torsion (β_{max}) is between 90° and 270°.

47. An optical cable according to Claim 45, wherein a thickness of homogenous polymer material greater than or equal to 0.10 mm is provided around said optical fibre.

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48. An optical cable according to Claim 40, wherein said open helix trajectory has an inversion pitch (P) of between 0.5 m and 5 m.

49. An optical cable according to Claim 40, comprising a plurality of optical fibres defining a ring of optical fibres which are equidistant from each other and arranged at the same distance from an axis of said cable.

50. An optical cable according to Claim 49, wherein said distance of said optical fibres from said axis is between 0.4 mm and 1.2 mm.

51. An optical cable according to Claim 40, comprising a plurality of optical fibres defining a first ring of optical fibres which are equidistant form each other and arranged at a first distance from an axis of said cable and a second ring of optical fibres which are equidistant from each other and arranged at a second distance from said axis which is greater than said first distance.

52. An optical cable according to Claim 51, wherein said first distance is between 0.4 mm and 0.8 mm and said second distance is between 0.9 mm and 1.2 mm.

53. An optical cable according to Claim 40, wherein said layer of polymer material has a thickness of between 0.9 mm and 1.5 mm.

54. An optical cable according to Claim 40, wherein said central element has a diameter of between 0.5 mm and 0.7 mm.

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